

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Damian J. Walter

Serial Number: 10/614,401

Filed: July 3, 2003

For: Automatic Dispenser for Underground Sprinkler Systems

Art Unit: 3752

Examiner: S. Barney

Remarks

Claims 1-19 remain in the application. Claims 1-19 stand rejected. None of the claims has been amended. The specification has been amended to clarify that the main valve is numbered **42** and that it is optional. This conforms to the text on page 11 as well as the dashed lines shown on the drawings. Applicant further notes that the description of wires **42a** and **42b** have been added to the specification to make it conform to the drawings. No new matter has been added.

The Rejections

The examiner has rejected claims 1 to 19 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0145057 to Leedy in view of U.S. Patent No. 3,260,415 to Minamiyama, and in further view of U.S. Patent No. 5,022,585 to Burgess.

Regarding claims 2 and 8, the examiner states that the fertilizer mixer of Leedy comprises a tank having a removable outer lid (32).

Regarding claims 3, 4, 9, and 10, the examiner argues that the dosing device has connection means. He concludes it would have been an obvious to one having ordinary skill in the art at the time the invention was made to use a threaded

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connection or latches, as either method is a common design choice in the art for securing mechanical parts.

Regarding claim 5, the examiner states that Minamiyama disclose the means for actuating the rotation is by motor (63).

Regarding claim 6, the examiner states that Burgess discloses the master control unit (128) having a clock (130) for timing. He concludes that it would have been obvious to one having ordinary skill in the art to modify the fertilizer mixer with the master control unit having a clock in order to ensure proper dosage of the fertilizer for each zone.

Regarding claim 7, the examiner states that abovementioned arguments apply.

Regarding claim 11, the examiner states that Leedy discloses a control valve (22) in an inlet pipe (18). With respect to the timer and motor controller, the examiner states that abovementioned arguments apply.

Regarding claim 12, the examiner states that the fertilizer-mixing device comprises a drain (42). Regarding claims 13 to 19, the examiner states that the apparatus of Leedy as modified by Minamiyama and Burgess is capable of performing the method or steps recited in the claims.

Response

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The applicant believes that all of the rejections and objections have been resolved. Applicant notes above that the amendments to the specification correct the inconsistencies and typographical errors noted by the examiner.

Regarding the § 103 rejections, applicant notes that to support a §103 rejection, it is not enough to show some components of the instant invention in various patents and then state that it would have been obvious to add these components into a main reference. It is black letter patent law that there must be some motivation, teaching or suggestion for combining them, which is found in the *references* themselves and not from the instant invention. The latter is hindsight reconstruction and is not permissible. Moreover, to support a §103 rejection, the combination suggested by the examiner must produce the invention *as claimed*.

The examiner relies on the Leedy application as the primary reference. To this, the examiner adds the systems of Minamiyama and Burgess.

Leedy is a single tank system used to supply fertilizer or other chemicals to a sprinkler system. Applicant concedes that Leedy is similar to the instant invention in that it uses the line water pressure to mix with the fertilizer. However, Leedy is oriented toward single zone system and in fact, Leedy teaches away from the type of system taught by Burgess:

By way of example....U.S. Pat. No. 5,022,585 to Burgess and 5,775,593 to Delorme disclose various automatic fertilizing and irrigating

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systems. U.S. Pat. No. 4,333,493 to Beiswenger discloses a plant fertilizer system attachable to a supply hose. While these devices fulfill their respective, particular objective and requirements, the aforementioned patents do not describe a *fertilizer mixing device for sprinkler systems for allowing fertilizer to be distributed through a sprinkler system*. (Emphasis added)

Clearly, Burgess does teach an automatic fertilizing system that can be used with a sprinkler system, so Leedy must mean something other than that. Applicant believes that Leedy is referring to systems that distribute the fertilizer in a sprinkler while mixing it with the specific feeder line. Burgess teaches a system in which a tank is used to hold mixed fertilizer, in liquid form, which is then moved by pump to the main line for distribution to all of the zones. Leedy apparently eschews the idea of one massive tank for all areas and, instead, desires a system that holds a measured amount of fertilizer and water for one given area. Moreover, by using small individual tanks, Leedy dispenses with the pumps needed to move the fertilizer from the main tank to the sprinklers. Thus, Leedy suggest that Burgess can be modified by eliminating the big tank and pumps by placing small tanks in each of the zone lines. Each of these tanks holds water and fertilizer in the proper amounts for that zone.

As the examiner notes, there is no way to distribute measured quantities of fertilizer to each zone from a common source in either Leedy or Burgess. To fill that need, the examiner turns to Minamiyama.

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A reading of the Minamiyama patent, however, reveals that it is not a system for distributing measured quantities of materials over specified time intervals. Rather, it is a huge "sifter". The Minamiyama is designed to "sift" prewetted dry materials to prevent their clumping in feeder hoppers.

Minamiyama explains this at col. 2, lines 41-58:

The cylindrical segmented member 21, on the other hand, is provided with a plurality of sections 22 radially extending from the hub 23, whereby there are formed a plurality of segmented chambers 24, each of which chambers is substantially of the same size and shape with the slits 42 and 52 in the instant embodiment. Said member 21 is further secured stationarily to the casing 11 by means of the outturned flange 21a in association with the out-turned flange 21a and in between the plates 41 and 51 by means of the hub 23 moveably passing therethrough the shaft 12. *Thus the slit plates 41 and 51 are allowed to rotate at a predetermined constant velocity and independently of the cylindrical member 21 when the drive shaft 12 is motivated by means of the energizing source. Member 14 is a chute which is secured to the casing 11 by bolting or other suitable means the outturned flange 14a with the outturned flange 11a via outturned flange 21a, operationally passing the drive shaft 12 through the slanting bottom wall 14b.* (Emphasis added).

They add at col. 3, lines 1-26:

...and the solid material travels downward in direct contact with the liquid material The solid material further continues downward shift to pass into each of the segmented chamber 24 one after another via upper slit 42 and is stored in said segmented chamber 24 in association with the lower plate 51 until -the lower slit 52 comes round into overlapping position with each of the segmented chambers 24 one after another whereby the solid material accumulated in the segmented

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chambers 24 is allowed to fall into the chute 14 chamber 'by chamber, the upper and lower slits 42 and 52 being provided in a shifted relationship, namely in an opposite direction in the instant embodiment, and the upper and lower plates 41 and 51 bearing said slits 43 and 52 being energized to rotate independently of the stationary segmented cylindrical member 21 having segmented chambers 24. *Thus, the discharge of solid material is carried out in a quantitative manner, forming an intermittent uniform descent and allowing no portion of the solid material being treated to hang in the solid material container.* (Emphasis added).

And further, at col. 3, line 71 to col. 4, line 8:

The slit plates however must be so disposed that the upper slit be positioned in a shifted relationship to the lower slit so as to create at least a transversal space interval corresponding to the space to be occupied by any of the segmented chambers, namely, at least a transversal spaced interval wide enough not to allow any of the segmented chambers to form in between said slit plates a direct passage for a descent of solid material in association with said slits. In other words, a given chamber must not be allowed to form a direct passage with the lower slit before said chamber is completely filled up with the solid material descending from the container.

Thus, it is clear from this that the mechanism of Minamiyama is designed to be in constant operation to allow the particulate matter to be disbursed into the compartments and then be discharged soon after. The cover and base plates are oppositely disposed to ensure that the material does not pass directly through the compartments, as this could lead to clumps of material being let through the system.

There is nothing in Minamiyama that suggests using the compartments for storage of particulate material for any length of time. Moreover, there is nothing that

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suggests a planned times movement of the bottom cover to release the contents of a segment at any given time *without having the other compartments emptied soon afterward*. This is because the system of Minamiyama is operating continuously-otherwise, the compartments would fill up and overflow because material is constantly being dropped. The constant action is needed to prevent clumping. Thus, Minamiyama teaches away from the idea of holding material in the chambers for any length of time. In essence, the Minamiyama device is a big sifter, where particulate material is constantly dropped from above and the rotating device constantly breaks up the clumps into a uniform free-flowing stream of particulate matter. This is not the system taught or claimed in the instant invention.

For these reasons, applicant does not believe that the combination raised by the examiner produces the claimed invention without the benefit of hindsight reconstruction and the complete modification of Minamiyama to operate as a timed discharge unit instead of a continuous discharge unit.

Because the references cited do not teach or suggest the invention as claimed in the independent claims, applicant believes the rejections of the dependent claims are also erroneous. Applicant concedes that things like timers are well known. When combined with the elements of the independent claims, however, applicant believes that these claims are not obvious in view of this art.

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Moreover, the rejections of the method claims are equally unsupported. As discussed above, the operation of Minamiyama is not suggestive of a time-release system that dispenses material at specified intervals. It is a continuously operating system. In addition, none of the other patents, either alone or in combination, teach or suggest the steps of the method as claimed.

Conclusion

In view of the above, the applicant believes that all of the objections and rejections have been resolved. Reexamination reconsideration and approval of the claims are requested soon.

Respectfully Submitted



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